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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,154	09/12/2003	Masataka Innan	16869K-093800US	6807

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EXAMINER

NGUYEN, MIKE

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,154

Applicant(s)

INNAN ET AL.

Examiner

Mike Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-19 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/18&8/05, 9/12/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

PD

DETAILED ACTION

1. Claims 1-20 are pending for the examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 8-16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipates by Ofek et al. (U.S. Pat. No. 6,108,748).

As to claim 1, Ofek' 748 teaches a method for controlling a storage system (fig. 1) including

a host computer (CPU/HOST 12 of fig. 1);

a first storage controller connected communicably to said host computer (new or second data storage system 16 of fig. 1), for receiving a data frame transmitted from said host computer and executing data input to and data output from a first storage device in response to a data input/output request described in said data frame (col. 7 lines 7-27 and col. 9 lines 34-49 and col. 8 lines 10-24); and

a second storage controller connected communicably to said first storage controller (older or first data storage system 14 of fig. 1),

comprising:

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relaying by said first storage controller, upon receipt of said data frame transmitted from said host computer, said data frame to said second storage controller in response to information described in said data frame (col. 7 lines 28-34 and col. 9 lines 50-54).

As to claim 2, Ofek' 748 teaches a method for controlling a storage system according to claim 1, comprising, by said second storage controller, receiving a data frame transmitted from said host computer to said first storage controller and relayed by said first storage controller, and executing data input to and data output from a second storage device in response to said data input/output request described in said data frame (col. 7 lines 42-47 and col. 8 lines 10-24 and col. 10 lines 1-13).

As to claims 4 and 18, Ofek' 748 teaches said information is at least one of: information for specifying a Fiber Channel port of said source of said data frame; information for specifying a Fiber Channel port of said destination of said data frame; and information for specifying said storage devices (fig 1 and col. 5 lines 51-60 and col. 6 lines 47-57 wherein the new or second data storage system uses high speed fiber optic paths 20 and 28 to receive and transmit the command or request; therefore, the command or request must specifies a fiber channel port of a source, a destination or storage devices).

As to claim 8, Ofek' 748 teaches a method for controlling a storage system according to claim 4, wherein said information for specifying said storage device is an identifier given to a

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logical storage area which is organized in zones in a storage area provided by said storage device (col. 8 lines 36-41).

As to claim 9, Ofek' 748 teaches a method for controlling a storage system according to claim 8, wherein said storage device is a disk drive (col. 8 lines 8-16).

As to claim 10, Ofek' 748 teaches a storage system (FIG. 1) comprising:

a first storage device (storage devices 17 of fig. 1); and

a first storage controller (new or second data storage system 16 of fig. 1) connected communicably to a host computer (CPU/HOST 12 of fig. 1), for receiving a data frame transmitted from said host computer and executing data input to and data output from the first storage device in response to a data input/output request described in said data frame (col. 7 lines 7-27 and col. 9 lines 34-49);

wherein said first storage controller comprises a relay device (channel process 25 of fig. 1) that relays to a second storage controller (older or first data storage controller 14 of fig. 1) a data frame transmitted from said host computer when said data frame transmitted from said host computer is a data frame that is permitted to be relayed to said second storage controller (col. 7 lines 28-34 and col. 9 lines 50-54).

As to claims 11 and 14, Ofek' 748 teaches said first storage controller further comprises a processor for referring to information described in said data frame transmitted from said host computer and judging whether said data frame transmitted from said host computer is a data

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frame that is permitted to be relayed to said second storage controller (col. 7 lines 11-17 and col. 9 lines 37-44).

As to claims 12 and 15, Ofek' 748 teaches when said data frame transmitted from said host computer is a data frame that is not permitted to be relayed to said second storage controller, said processor transmits said data frame transmitted from said host computer, to another processor in said first storage controller (col. 7 lines 28-32 and col. 9 lines 45-49).

As to claim 13, Ofek' 748 teaches a storage system according to claim 10, wherein said first storage controller further comprises a memory for storing information on data frame that are permitted to be relayed to said second storage controller (cache 18 of fig. 1).

As to claim 16, Ofek' 748 teaches a storage system according to claim 10, wherein said data frame is a data frame conforming to Fiber Channel Protocol (fig 1 and col. 5 lines 51-60 and col. 6 lines 47-57 wherein the new or second data storage system uses high speed fiber optic paths 20 and 28 to receive and transmit the command or request; therefore, the command or request must conforms to Fiber Channel Protocol).

As to claim 19, Ofek' 748 teaches a storage system according to claim 16, wherein said processor checks whether said data frame transmitted from said host computer is permitted to make access to said Fiber Channel port of the destination or to said first storage device of the destination (col. 7 lines 12-27 and col. 9 lines 37-49).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek' 748 in view of Ofek (U.S. Pat. No. 6,044,444).

As to claims 3 and 17, Ofek' 748 teaches said data frame is a data frame conforming to Fiber Channel Protocol (fig 1 and col. 5 lines 51-60 and col. 6 lines 47-57 wherein the new or second data storage system uses high speed fiber optic paths 20 and 28 to receive and transmit the command or request; therefore, the command or request must conforms to Fiber Channel Protocol) but Ofek' 748 fails to explicitly teach a Fiber Channel switch. Ofek' 444; however, teaches repeaters 306-307 and 310-311 (fig. 5) are ESCON Directors or Remote Channel Extenders existing on a private fiber 309 or a common carrier 312 (col. 12 lines 23-40). It would have been obvious to a person of ordinary skill in the art to have the repeaters in order to provide generating and maintaining a back-up or mirrored copy without intervention from the host which seriously degrades the performance of data transfer link between the host computer and first data storage system (col. 2 lines 11-19).

Allowable Subject Matter

6. Claim 20 is allowed.

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7. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

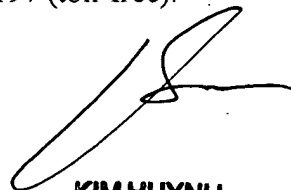
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Nguyen whose telephone number is 571 272-4153. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571 272-4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Nguyen
Patent Examiner
Group Art Unit 2182


KIM HUYNH
PRIMARY EXAMINER

7/21/05

07/19/2005